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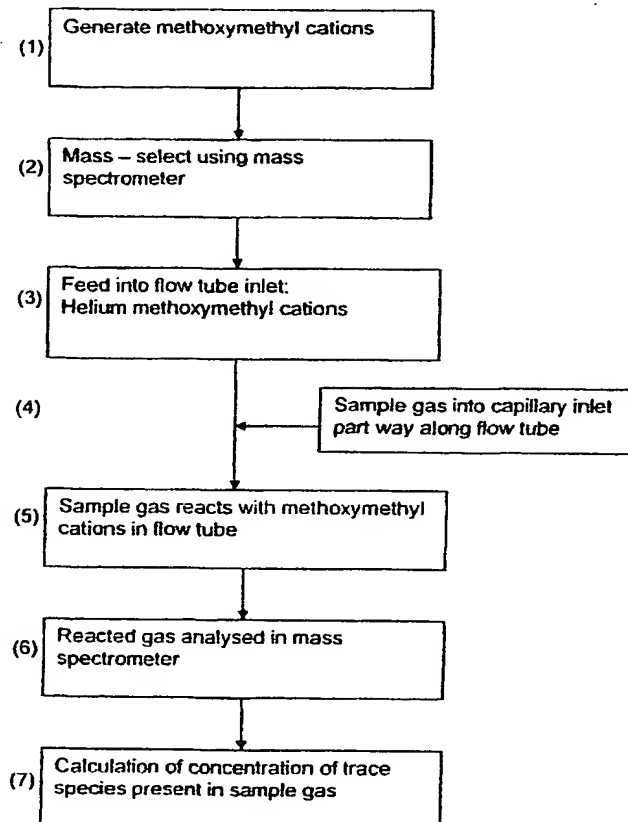
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(54) Title: **IMPROVED METHOD OF CHEMICAL IONIZATION MASS SPECTROMETRY**



(57) Abstract: A method of detecting a substance present in a gas or a gas mixture using SIFT-MS technology comprising the steps of inducing a supply of alkoxymethyl cations into the inlet of the flow tube, reacting a sample of the gas with the alkoxymethyl cations, analysing the reacted gas sample, and calculating the concentration of trace levels of molecules containing heteroatoms in the reacted gas sample.